Docket No. AB-116U

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (original): A method for treating a patient with at least one of epilepsy, a metabolic disorder, a mood disorder, an anxiety disorder, chronic pain, a gastrointestinal disorder, hypertension, a cardiac disorder, a psychotic disorder, a cognitive disorder, dementia, an eating disorder, a sleep disorder, an endocrine disorder, a movement disorder, and headache, comprising:

providing at least one leadless stimulator having at least two electrodes;

implanting the at least one stimulator adjacent to at least one portion of the vagus nerve;

providing operating power to the at least one stimulator;

using at least one external appliance to transmit stimulation parameters to the at least one stimulator;

receiving and storing the stimulation parameters;

generating stimulation pulses in accordance with the stimulation parameters; and

delivering the stimulation pulses to nerve fibers adjacent to the at least one stimulator;

wherein the stimulator has a size and shape suitable for placement of the electrodes adjacent to the at least one portion of the vagus nerve.

Claim 2 (original): The method of Claim 1 wherein the at least one portion of the vagus nerve comprises a portion distal to at least a superior cervical cardiac branch of the vagus nerve.

Claim 3 (original): The method of Claim 2 wherein the at least one portion of the vagus nerve comprises a portion distal to at least an inferior cervical cardiac branch of the left vagus nerve.

Claim 4 (original): The method of Claim 3 wherein the at least one portion of the vagus nerve comprises a portion distal to at least a thoracic cardiac branch of the vagus nerve.

Claim 5 (original): The method of Claim 1 wherein the stimulation pulses are delivered at less than about 50 to 100 Hz.

Claim 6 (original): The method of Claim 5 wherein the stimulation is provided to relieve symptoms of at least one of epilepsy, a mood disorder, a metabolic disorder, a cardiac disorder, and a gastrointestinal disorder.

Claim 7 (original): The method of Claim 6 wherein the cardiac disorder comprises at least tachycardia.

Claim 8 (original): The method of Claim 1 wherein the stimulation pulses are delivered at greater than about 50 to 100 Hz.

Claim 9 (original): The method of Claim 8 wherein the stimulation is provided to relieve symptoms of at least one of a cardiac disorders and a metabolic disorders.

Claim 10 (original): The method of Claim 9 wherein the cardiac disorder comprises at least bradycardia.

Claim 11 (original): The method of Claim 1 wherein the at least one portion of the vagus nerve comprises at least one of the pharyngeal branches and laryngeal branches of the vagus nerve, wherein the stimulation is provided to relieve a sleep disorder.

Claim 12 (original): The method of Claim 1 wherein the at least one portion of the vagus nerve comprises at least one of the gastrointestinal branches of the vagus nerve, wherein the stimulation is provided to relieve a gastrointestinal disorder.

Claim 13 (original): The method of Claim 1 wherein the at least one portion of the vagus nerve comprises at least one vagus nerve branch innervating the pancreas, wherein the stimulation is provided to relieve an endocrine disorder.

Claim 14 (original): The method of Claim 1 further comprising

providing at least one sensor;

using the at least one sensor to sense a physical condition; and

determining the stimulation parameters based upon the sensed condition.

Claim 15 (original): The method of Claim 14 wherein the at least one sensor is a part of the stimulator.

Claim 16 (original): The method of Claim 1 further comprising providing and implanting more than one stimulator.

Claim 17 (withdrawn): A method for treating a patient with at least one of epilepsy, a metabolic disorder, a mood disorder, an anxiety disorder, chronic pain, a gastrointestinal disorder, hypertension, a cardiac disorder, a psychotic disorder, a cognitive disorder, dementia, an eating disorder, a sleep disorder, an endocrine disorder, a movement disorder, and headache, comprising the steps of:

providing at least one means for stimulating tissue;

implanting the at least one stimulating means adjacent to at least one portion of the vagus nerve;

providing operating power to the at least one stimulating means;

transmitting stimulation parameters to the at least one stimulating means using at least one external appliance;

receiving and storing the stimulation parameters;

generating stimulation pulses in accordance with the stimulation parameters; and

delivering the stimulation pulses to nerves fibers adjacent to the at least one stimulating means;

wherein the stimulating means has a size and shape suitable for placement near the at least one portion of the vagus nerve and has leads up to about 150 mm long.

Claim 18 (withdrawn): The method of Claim 17 wherein the body of the stimulator is no more than about 150 mm from the at least one portion of the vagus nerve to be stimulated.

Claim 19 (withdrawn): The method of Claim 18 wherein the at least one portion of the vagus nerve comprises a portion distal to at least a superior cervical cardiac branch of the vagus nerve.

Claim 20 (withdrawn): The method of Claim 19 wherein the at least one portion of the vagus nerve comprises a portion distal to at least an inferior cervical cardiac branch of the left vagus nerve.

Claim 21 (withdrawn): The method of Claim 20 wherein the at least one portion of the vagus nerve comprises a portion distal to at least a thoracic cardiac branch of the vagus nerve.

Claim 22 (withdrawn): A method for treating a patient with at least one of epilepsy, a metabolic disorder, a mood disorder, an anxiety disorder, chronic pain, a gastrointestinal disorder, hypertension, a cardiac disorder, a psychotic disorder, a cognitive disorder, dementia, an eating disorder, a sleep disorder, an endocrine disorder, a movement disorder, and headache, comprising:

providing at least one leadless stimulator having at least two electrodes;

providing at least one sensor;

implanting the at least one stimulator adjacent to at least one portion of the vagus nerve;

providing operating power to the at least one stimulator;

using the sensor to sense a physical condition;

determining stimulation parameters based upon the sensed condition;

generating stimulation pulses in accordance with the stimulation parameters; and

delivering the stimulation pulses to nerve fibers adjacent to the at least two electrodes;

wherein the stimulator has a size and shape suitable for placement of the electrodes adjacent to the at least one portion of the vagus nerve.

Claim 23 (withdrawn): The method of Claim 22 wherein the at least one sensor is a part of the stimulator.

Claim 24 (withdrawn): The method of Claim 22 wherein the stimulation parameters are determined using at least one external appliance.

Claim 25 (withdrawn): The method of Claim 22 wherein providing power to the at least one stimulator comprises receiving power from at least one external appliance.

Claim 26 (withdrawn): The method of Claim 25 wherein providing power to the at least one stimulator further comprises storing the power received from the at least one external appliance.

Claim 27 (withdrawn): The method of Claim 22 further comprising providing and implanting more than one stimulator.

Claim 28 (withdrawn): The method of Claim 22 wherein the at least one portion of the vagus nerve comprises a portion distal to at least a superior cervical cardiac branch of the vagus nerve.

Claim 29 (withdrawn): The method of Claim 28 wherein the at least one portion of the vagus nerve comprises a portion distal to at least an inferior cervical cardiac branch of the left vagus nerve.

Claim 30 (withdrawn): The method of Claim 29 wherein the at least one portion of the vagus nerve comprises a portion distal to at least a thoracic cardiac branch of the vagus nerve.

Claim 31 (withdrawn): The method of Claim 22 wherein the sensor senses at least one of electrical activity of the brain, electrical activity of a nerve, muscle activity, limb tremor, head tremor, and patient movement.

Claim 32 (withdrawn): The method of Claim 22 wherein the sensor senses at least one of medication level, neurotransmitter level, hormone level, cytokine level, enzyme level, level of a bloodborne substance, and level of a substance in the cerebrospinal fluid.

Claim 33 (withdrawn): A system for treating a patient with at least one of epilepsy, a metabolic disorder, a mood disorder, an anxiety disorder, chronic pain, a gastrointestinal disorder, hypertension, a cardiac disorder, a psychotic disorder, a cognitive disorder, dementia, an eating disorder, a sleep disorder, an endocrine disorder, a movement disorder, and headache, comprising:

at least one leadless stimulator having at least two electrodes;

means for implanting the at least one stimulator adjacent to at least one portion of the vagus nerve;

means for providing operating power to the at least one stimulator;

at least one external appliance used to transmit stimulation parameters to the at least one stimulator;

means for receiving and storing the stimulation parameters; and

means for generating stimulation pulses in accordance with the stimulation parameters;

wherein the at least two electrodes deliver the stimulation pulses to nerve fibers adjacent to the at least one stimulator; and

wherein the stimulator has a size and shape suitable for placement of the electrodes adjacent to the at least one portion of the vagus nerve.

Claim 34 (withdrawn): The system of Claim 33 further comprising

at least one sensor for sensing a physical condition; and

means for determining the stimulation parameters based upon the sensed condition.

Claim 35 (withdrawn): The system of Claim 34 wherein the at least one sensor includes means for sensing at least one of electrical activity of the brain, electrical activity of a nerve, muscle activity, limb tremor, head tremor, patient movement, medication level, neurotransmitter level, hormone level, cytokine level, enzyme level, level of a bloodborne substance, and level of a substance in the cerebrospinal fluid.